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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,099	06/13/2001	Yoshitaka Sainomoto	500.40212X00	3221
20457	7590	08/23/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			TANG, KENNETH	
			ART UNIT	PAPER NUMBER
			2127	

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/879,099	<b>Applicant(s)</b> SAINOMOTO ET AL.	
	<b>Examiner</b> Kenneth Tang	<b>Art Unit</b> 2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-23 are presented for examination.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 1, “an amount of data frames” is indefinite because it is not made explicitly clear in the claim language whether this refers to a general plurality of data frames or a specific number of data frames.
- b. In claim 1, “storing an amount of data frames transmitted” is indefinite because it is not made explicitly clear in the claim language whether the storing occurs before the transmission or after the transmission or if the storing is occurring on the transmitting side, the receiving side, both, or neither.
- c. In claim 1, “data frames” line 11 is indefinite because it is not made explicitly clear whether this is the same as the data frame in line 10 or in line 4, or line 7. If it refers to the data frame of line 7, then “stored amounts of data frames” in line 11 should be amended to “stored amounts of said data frames”.

d. In claim 1, the limitation “comparing the stored amounts of data frames with each other” is indefinite because it is not made explicitly clear in the claim language who the other is in each other.

e. Claims 5 and 8 are rejected for the same reasons as stated in the rejection of claim 1 above.

f. In addition, in claim 5, “an addition result” is indefinite because it does not make any sense as to what an addition result is.

g. In addition, in claim 5, “corresponding to the stored line information” is indefinite because it is not made explicitly clear in the claim language how it knows which is the corresponding one. In addition, it is not made clear who or what makes the determination of the correspondence.

h. In claim 17, “counting the number of data frames received from either one of at least the two communication lines and processed, and storing the counted value;” is indefinite because it is not made clear what this has anything to do with the rest of the limitations in the claim. There has been no established relationship between the counting of frames and the other limitations.

i. Claim 21 is rejected for the same reasons as stated in the rejection of claim 5 above.

j. In claim 23, “A data frame reception method according to claim 21, wherein said step of executing processing of the receiving data frame stored line information inserted into the received data frame.” is indefinite because it is not made clear what the limitation is due to being grammatically incorrect.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Jurkevich (US 5,420,857).**

4. As to claim 1, Fernstrom teaches a data frame distribution method wherein either one of at least two information processing apparatus (*Fig. 1, item 1*) interconnected by at least two communication lines distributes and transmits (*Fig. 1, items 7 and 9*) a data frame to either one of at least the two communication lines, the method comprising the steps of:

storing an amount of data frames transmitted at least the two communication lines for each of at least the two communication lines (*Fig. 2, items 15 and 19*);

generating a data frame to be transmitted (*col. 1, lines 61-67, col. 3, lines 30-50, Abstract*);

comparing the stored amounts of data frames with each other (*col. 9, lines 19-29*);

transmitting the generated data frame to the selected communication line (*col. 1, lines 61-62*).

5. Fernstrom fails to explicitly teach selecting a communication line having the smallest stored amount of data frames. However, Jurkevich teaches selecting from a plurality of

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communication lines based on the best choice based on line status and bandwidth availability (smallest stored amount of data frames). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature of selecting a communication line having the smallest amount of data frames to the existing system and method of Fernstrom because choosing the best choice of an output line would increase the speed of transmission (*col. 19, lines 52-64*).

6. As to claim 2, Fernstrom teaches wherein said storing step stores a cumulative value of the number of bytes of data frames transmitted to each of least the two communication lines, as the amount of data frames (*col. 3, lines 44-59*).

7. As to claim 3, Fernstrom teaches wherein said storing step stores a cumulative value of the number of data frames transmitted to each of at least the two communication lines, as the amount of data frames (*col. 3, lines 44-59*).

8. As to claim 4, Fernstrom teaches wherein said transmitting step further includes a step of adding an amount of the generated data frame to the amount of data frames stored for the selected communication line (*col. 2, lines 21-26, and col. 3, lines 40-42*).

9. As to claim 5, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Fernstrom teaches storing line information of either one of at least the two communication lines (*col. 5, lines 18-37 and 48-67*) and adding an amount of the generated data

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frame to the amount of data frames stored for the communication line corresponding to the stored line information, and storing an addition result (*col. 4, lines 20-22, col. 2, lines 21-26, and col. 3, lines 40-42*).

10. As to claim 6, it is rejected for the same reasons as stated in the rejection of claims 1 and 5.

11. As to claim 7, it is rejected for the same reasons as stated in the rejection of claim 2.

12. As to claim 8, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Fernstrom teaches a transmitting and receiving unit (*Fig. 2, see Abstract*).

13. **Claims 9-16 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Jurkevich (US 5,420,857), and further in view of Morita et al. (hereinafter Morita) (US 6,389,041 B1).**

14. As to claim 9, it is rejected for the same reasons as stated in the rejection of claims 1 and 8. In addition, Fernstrom teaches checking to make sure that the received data packet has the correct structure and the correct order (*col. 9, lines 19-29*) but fails to explicitly teach counting the number of data frames transmitted at least the two communication lines and inserting the counted value in the generated data frame. However, Morita teaches receiving a data frame



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transmitted, comparing the byte counts of the frames, and counting the number of data frames (transmitted byte count counter) received from either one of at least the two communication lines and processed (*col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of counting the number of data frames transmitted at least the two communication lines and inserting the counted value in the generated data frame to the existing system in order to provide synchronization between multisystems (*col. 1, lines 6-16 and lines 59-65, col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49*).

15. As to claim 10, Morita teaches wherein said inserting step further counts up the counted value and inserts the count-up count in the data frame as the order information (*col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49*).

16. As to claim 11, it is rejected for the same reasons as stated in the rejection of claim 2.

17. As to claim 12, it is rejected for the same reasons as stated in the rejection of claim 8. In addition, Fernstrom teaches comparing the order information inserted into the received data frame with the counted value; and if the order information is coincident with the counted value, executing processing of the received data frame (*col. 9, lines 19-45*).

18. As to claim 13, Fernstrom teaches wherein if the order information is not coincident with the counted value, said comparing step compares the order information inserted into another data

frame received from either one of at least the two communication lines with the counted value  
(*col. 9, lines 19-45*).

19. As to claim 14, Fernstrom teaches wherein the order information inserted into all received data frames is not coincident with the counted value, said comparing step suspends processing until another data frame is received from either one of at least the two communication lines (*col. 9, lines 26-29*).

20. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 10.

21. As to claim 16, Fernstrom teaches wherein said step of executing processing of the received data frame includes a step of deleting the order information inserted into the received data frame (*claim 8*).

22. As to claim 21, it is rejected for the same reasons as stated in the rejection of claim 5. In addition, Fernstrom teaches judging (checking to see if received data packet has a correct structure and have the correct order) whether the data frame was received from the communication line corresponding to the stored line information and the data frame is received from the communication line corresponding to the stored line information, executing processing of the received data frame (*col. 9, lines 19-45*).

23. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 14.

24. As to claim 23, Fernstrom teaches wherein said step of executing processing of the receiving data frame stored line information inserted into the received data frame (*col. 9, lines 30-45*).

25. **Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Morita et al. (hereinafter Morita) (US 6,389,041 B1).**

26. As to claim 17, Fernstrom teaches a data frame reception method of receiving a data frame transmitted from either one of at least two information processing apparatus interconnected by at least two communication lines, via either one of at least the two communication lines, the method comprising the steps of:

receiving a data frame transmitted from either one of at least the two communication lines (*col. 4, lines 20-23*);

comparing order information inserted into the received data frame with the counted value (*col. 9, lines 19-45*); and

if the order information is coincident with the counted value, executing processing of the received data frame (*col. 9, lines 19-45*).

27. Fernstrom fails to explicitly teach counting the number of data frames received from either one of at least the two communication lines and processed, and storing the counted value. However, Morita teaches receiving a data frame transmitted, comparing the byte counts of the

frames, and counting the number of data frames (transmitted byte count counter) received from either one of at least the two communication lines and processed (*col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of counting the number of data frames from the communication lines in order to provide synchronization between multisystems (*col. 1, lines 6-16 and lines 59-65*).

28. As to claim 18, Fernstrom teaches a wherein if the order information is not coincident with the counted value, said comparing step compares the order information inserted into another data frame received from either one of at least the two communication lines with the counted value (*col. 9, lines 19-45*).

29. As to claim 19, it is rejected for the same reasons as stated in the rejection of claim 14.

30. As to claim 20, it is rejected for the same reasons as stated in the rejection of claim 10.

### ***Conclusion***

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- k. **US 6,381,239 B1 (Atkinson et al.)** teaches communication between lines with data frames.


1. **US 6,768,738 B1 (Yazaki et al.)** teaches having a monitor to track and count the received packets to determine bandwidth information.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt  
8/8/04

  
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